

AMENDMENTS TO THE CLAIMS

Claims 1-29 (Cancelled.)

30. (New) A method of forming a MOS transistor on a semiconductor material of a first conductivity type, the semiconductor material having a top surface, the method comprising:

forming a first material on the top surface of the semiconductor material;

removing a portion of the first material to expose a region of the top surface of the semiconductor material and leave a remaining portion of the first material on the top surface of the semiconductor material;

forming a semiconductor layer of the first conductivity type on the top surface of the semiconductor material, the semiconductor layer including silicon, germanium, and carbon;

removing the remaining portion of the first material from the top surface of the semiconductor material;

forming a layer of insulation material over the semiconductor layer;

forming a layer of conductive material on the layer of insulation material; and

removing a portion of the layer of conductive material to form a gate.

31. (New) The method of claim 30 wherein the semiconductor layer is selectively epitaxially grown.

32. (New) The method of claim 31 and further comprising forming spaced-apart source and drain regions of a second conductivity type in the semiconductor layer.

33. (New) The method of claim 31 and further comprising forming a layer of silicon free from germanium and carbon on the semiconductor layer before the remaining portion of the first material is removed, the layer of insulation material contacting a top surface of the layer of silicon.

34. (New) The method of claim 33 and further comprising forming spaced-apart source and drain regions of a second conductivity type in the semiconductor layer and the layer of silicon.

35. (New) The method of claim 30 wherein the semiconductor layer is deposited.

36. (New) The method of claim 35 and further comprising forming spaced-apart source and drain regions of a second conductivity type in the semiconductor layer.

37. (New) The method of claim 35 and further comprising forming a layer of silicon free from germanium and carbon on the semiconductor layer before the remaining portion of the first material is removed, the layer of insulation material contacting a top surface of the layer of silicon.

38. (New) The method of claim 37 and further comprising forming spaced-apart source and drain regions of a second conductivity type in the semiconductor layer and the layer of silicon.